<u>REMARKS</u>

Claims 1, 10 and 20 are amended. Claims 1-20, as amended, remain in the application with Claims 3-18 and 13-18 withdrawn. Claim 10 is amended to correct a minor typographical error. No new matter is added by the amendments to the claims.

The Rejections:

In the Office Action dated October 13, 2004, the Examiner rejected Claims 1, 2, 9-12, 19, and 20 under 35 U.S.C. 102(e) as being anticipated by Brust et al. 6,871,116. The Examiner stated that Brust discloses a method for stacking cases on a pallet per the claimed invention. According to the Examiner, the Brust method comprises the steps of: supplying cases via conveyors; defining rules for selecting cases from the conveyors to be placed on respective pallet (full layer rule, height rules for stability, and/or exception case rule); determining physical characteristics of cases in the conveyor including dimensions of a case base and case height (at least column 4, line 55); determining available locations on the pallet where a case on the conveyor can be placed (at least column 5, lines 66-67); applying the rules sequentially in a variable prioritized order to at least a portion of the cases and the available locations (Figure 2); identifying a selected case that satisfies at least one of the rules and a corresponding location on the pallet for the selected case (at least column 7, lines 16—17); and using an industrial robot to place the selected case on the pallet in corresponding location.

In regards to Claim 11, the Examiner stated that the Brust method further comprises: repeatedly applying the rules in a variable prioritized order to the case on the conveyor until the pallet is filled.

In regards to Claims 2 and 12, the Examiner stated that the Brust method further comprises: determining the rule that identified the last selected case that was placed on the pallet and reapplying the determined rule before applying another rule to the case (method loop in Figure 2, from block 230-260).

In regards to Claims 9 and 19, the Examiner stated that the Brust method further comprises: continually updating available regions on the pallet where a case can be placed as the cases are placed on the pallet; and continually replenishing the conveyor with cases after one of the cases is placed on the pallet.

000132815\0015\669786-1

10

In regards to Claim 20, the Examiner stated that the Brust identifying step comprises recognizing one of the pallet cases having a case height equal to a case height of a selected case on the conveyor and a corresponding position adjacent the one pallet case for the selected case on the conveyor (i.e. height rule for stability).

The Cited Reference:

The Brust et al. patent shows a method of determining pallet layers for placement by a material handling system robot. The method can include identifying cases for inclusion in a pallet and identifying case dimension information for the cases. Using the case dimension information, the cases can be classified into at least one group, wherein each group is defined by a height range such that cases classified within a group have a height within the height range associated with that group. Cases of one of the groups can be assigned to locations within a pallet layer, wherein the pallet layer has an area within a predefined area range.

Brust shows in Fig. 1 an automated material handling system **100** having a control system **105** and a material handling system **110**. The control system **105** can be configured to determine pallet configuration data specifying arrangements of cases for placement on one or more pallets. By determining pallet configuration data, the control system **105** provides direction to the material handling system **110**. The pallet configuration data can specify the case release sequence and routing of pallets and cases throughout the material handling system **110** when the pallet is physically constructed. More particularly, the pallet configuration data can specify the order in which cases are to be released from various storage locations, which storage locations are to release cases, the routing of cases throughout the material handling system **110**, as well as the manner and order in which cases are to be added or placed onto pallets. (Col. 4, Lines 25-40)

Thus, the Brust system generates pallet configuration data, how the selected cases are to be positioned on the pallet, before the cases are released from storage and conveyed to the material handling system **110**.

The Response:

The claimed invention pertains to a computer-controlled method for selecting cases presented on a buffer conveyor in random order and using an industrial robot to produce a stable stack of the cases on the pallet. Applicants amended independent Claims 1, 10 and 20 to clarify

11

that the cases are supplied in a random order. The claims define a method for stacking cases on a pallet including the steps of:

    a. supplying cases to a buffer in a random order;

    b. determining physical characteristics of cases in the buffer including dimensions of a case base and a case height (case height only for Claim 20);

    c. using a characteristic of a case in the buffer to identify a corresponding position on the pallet; and

    d. using an industrial robot to place the case at the corresponding position.

Thus, the claimed method determines case placement based upon the cases currently in the buffer. In contrast, Brust determines case placement for all cases to be placed on the pallet before the cases are processed by the material handling system. Therefore, Brust does not "determine physical characteristics of cases in the buffer" and "use a characteristic of a case in the buffer to identify a corresponding position on the pallet". In Brust, the physical characteristics of the cases and the corresponding positions are all determined before the cases are delivered in a predetermined order for placement on the pallet. The Brust system cannot accommodate cases delivered in a random order as does the claimed method.

Claim 20, as amended, further defines the method wherein a case already on the pallet is identified as having a case height equal to a case height of a selected buffer case, a corresponding position adjacent the one pallet case is identified and the selected case is placed at the corresponding position. Such a method is not described in or suggested by Brust which system has already determined all of the case positions before any case is placed on the pallet.

The Examiner stated that the prior art made of record and not relied upon is considered to be of interest to Applicants' disclosure. The Examiner cited: U.S. Patent No. 3,586,176 issued to Rackman et al.; U.S. Patent No. 4,287,459 issued to Dahlstrom; U.S. Patent No. 4,641,271 issued to Konishi et al.; U.S. Patent No. 4,692,876 issued to Tenma et al.; U.S. Patent No. 5,098,254 issued to Becicka et al.; U.S. Patent No. 5, 163,808 issued to Tsubone et al.; U.S. Patent No. 5,203,671 issued to Cawley et al.; U.S. Patent No. 5,473,545 issued to Schausten; U.S. Patent No. 5,613,826 issued to Scott; U.S. Patent No. 5,738,484 issued to Taylor; U.S. Patent No. 5,844,807 issued to Anderson et al.; and U.S. Patent No. 6,055,462 issued to Sato. Applicants reviewed these references and found them to be no more pertinent than the prior art relied upon by the Examiner in his rejections.

000132815\0015\669786-1

12

PAGE 13/14 * RCVD AT 1/13/2006 11:55:27 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/27 * DNIS:2738300 * CSID:248 258 1439 * DURATION (mm-ss):03-28

In view of the amendments to the claims and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.

13